Remarks

Claims 6-18 and 22-27 were pending. Claims 6-18 and 22-27 are rejected. This response amends claims 6, 10, 13, 14, 16 and 18. Claims 22-24 have been canceled. Therefore claims 6-18 and 25-27 are now pending.

35 U.S.C. § 112

Claims 6-18 and 22-27 are rejected under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Office action alleges the phrase "per serving" is indefinite because it is unclear what amount or quantity of NAG constitutes a serving.

Although Applicants disagree, in order to expedite prosecution independent claims 6 and 18 are amended to clearly define a serving. Claims 6 and 18 have been amended to specify that "...a serving is about 8 ounces...." Support for this amendment can be found in the specification, for example, on p. 22, line 18 and p. 33, ll. 10-11. In these two examples, a serving size is defined as 8 ounces.

Claims 10 and 14 have been amended to recite a NAG food product comprising "...from about 1 g NAG/1000 g of food product to about 1 g NAG/0.1 g of food product...." Support for this amendment can be found in the specification, for example, on p. 12, ll. 12-14.

Claims 7-8, 11-13, 15-17 and 25-27 depend directly or indirectly from claims 6, 10, 14 and 18. Applicants therefore request that the 35 U.S.C. § 112 rejection of claims 6-18 and 25-27 be withdrawn.

35 U.S.C. § 103(a)

Claims 6-9, 18 and 25 are rejected under 35 U.S.C. § 103(a) as unpatentable over Matahira *et al.* (EP 1075836 A2). Applicants disagree and request reconsideration.

Independent claims 6 and 18 recite, in part, heat pasteurizing a NAG beverage at a temperature of at least about 160°F and that at least 70% of the NAG remains after such heating. Matahira *et al.* disclose a method of preparing products comprising NAG. However, Matahira *et al.* do not disclose heat pasteurization of a NAG-containing beverage or how much NAG would remain if the beverage were so heated. On page 4, the Office action states that pasteurization at temperatures of at least 160°F is common in the art, and that it would have been obvious to have used the method of Matahira *et al.* to prepare a beverage comprising NAG and to heat-pasteurize the beverage to kill any microorganisms present. Applicants disagree and request reconsideration.

Although pasteurization to kill microorganisms is commonly known, as discussed in the current application, the industry has followed the belief that exposure of glucosamine to relatively high temperatures inactivates glucosamine. In fact, U.S. Patent No. 6,423,929 teaches that beverages containing glucosamine are prepared using a two-step process to minimize chemical alteration of glucosamine. In a first step, a juice drink base is heat pasteurized. In a second step, a separate glucosamine solution is heated at a temperature of below 160°F to prevent inactivation of glucosamine and subsequently added to the juice drink base. (Page 2, ll. 1-9). Thus, it would not have been obvious to one of ordinary skill in the art to prepare a beverage containing NAG and then to heat-pasteurize the beverage. Therefore, based on what was known in the art, it cannot be assumed that the beverages in Matahira *et al.* were exposed to temperatures of at least 160°F. In fact, there is no teaching or suggestion in Matahira *et al.* that these beverages were heated. The discovery that NAG did not significantly degrade when exposed to the high temperatures of pasteurization was an unexpected result observed by the inventors.

The Office action does not present any reference or evidence showing that (1) Matahira *et al.* expose their beverage to at least 160°F and (2) that if the beverage with NAG is so heated, at least 70%

of the NAG remains. To establish a *prima facie* case of obviousness, the Office action must clearly articulate why the claimed invention would have been obvious. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). MPEP § 2142. Applicants believe the Office action has not met the burden of proving a *prima facie* case of obviousness in view of Matahira *et al.* and respectfully request withdrawal of the rejection of claims 6- and 18.

Claims 7-9 and 25 depend from claim 6 and are allowable for at least the reasons set forth in relation to claim 6, and further in view of the patentable combinations of features recited in these dependent claims. For example, claim 9 recites the NAG is derived from fungal biomass containing chitin. Matahira *et al.* obtain NAG by hydrolysis of chitins derived from the shells of crustaceans or through chemical synthesis by acetylation of a D-glucosamine chlorate.

Claims 22 and 23 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Troyano *et al.* Merely in order to expedite prosecution, claims 22 and 23 have been canceled without prejudice, rendering this rejection moot.

Claims 10-17, 24, 26 and 27 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Matahira *et al.* Applicants disagree and request reconsideration.

Independent claims 10 and 14 recite, in part, heating or having the NAG food product at a temperature of at least about 160°F. To anticipate a claim, the reference must teach every element of

the claim. MPEP § 2131. However, Matahira *et al.* do not teach heating a food product to a temperature of at least about 160°F. Matahira *et al.* are silent with respect to the temperature of the food product, and such silence cannot be construed to necessarily mean that the product is heated to a temperature of at least about 160°F. Furthermore, claim 14 recites that about 70% of the NAG remains in the NAG food product after heating. Matahira *et al.* do not disclose the amount of NAG in their finished product. The silence of Matahira *et al.* with respect to the amount of NAG in the finished product does not imply that the final amount of NAG is the same as the amount initially added to the food product. Thus, claims 10 and 14 are not anticipated by Matahira *et al.* Applicants request that this 35 U.S.C. § 102(b) rejection be withdrawn.

Matahira *et al.* do not disclose either the amount of NAG in the finished product or the temperature at which the product is prepared. Therefore, Matahira *et al.* do not render the claims obvious. On page 8, the Office action states, "...since Matahira *et al.*'s NAG food composition is a cookie then the said composition must have been heated at a temperature of at least 160°F by baking." This statement is conclusory and does not meet the burden of establishing a *prima facie* case of obviousness. MPEP § 2142. Furthermore, there are well-known methods for preparing "no-bake" cookies. For example, an Internet search for "no-bake cookies" returns many recipes for preparing such cookies. The Office action cites no factual support showing that Matahira *et al.* heat the food product to a temperature of at least 160°F or that the final composition retains at least 70% of the NAG. In fact, Matahira *et al.* are silent with respect to the amount of NAG in their finished product and the temperature of the food product. Such silence cannot be construed as teaching or suggesting a temperature of at least 160°F or that at least 70% of the NAG remains in the final product.

Thus, claims 10 and 14 are neither anticipated by nor obvious in view of Matahira *et al.*, and Applicants respectfully request withdrawal of the rejection. Claims 11-13, 15, 16 and 25-27 depend from claims 10 and 14 and are allowable for at least the reasons discussed above.

If there are any minor issues to be resolved before a Notice of Allowance is granted, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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